

What is claimed is:

1. An implantable device for delivering a therapeutic agent into a vessel, the device comprising:
a stent formed from a tubular member, the tubular member having a lumen and a multiplicity of pores in fluid communication with the lumen; and
a therapeutic agent disposed within the lumen, wherein the therapeutic agent is configured to be eluted from the lumen into the vessel through the multiplicity of pores after implantation of the stent within the vessel.
2. The device of claim 1 wherein the lumen extends from a proximal end of the tubular member to a distal end of the tubular member.
3. The device of claim 1 wherein the tubular member comprises at least one solid section that segregates the lumen into two or more compartments.
4. The device of claim 3 wherein a compartment is disposed between a first solid section and a second solid section.
5. The device of claim 1 wherein the pores are spaced apart at variable distances with respect to one another.
6. The device of claim 1 wherein the pores are disposed circumferentially about an exterior surface of the tubular member.

7. The device of claim 1 wherein the multiplicity of pores vary in size with respect to one another.

8. The device of claim 1 wherein the multiplicity of pores vary in shape with respect to one another.

9. The device of claim 1 wherein the tubular member comprises a contracted state suitable for insertion into a vessel, and a deployed state in which the tubular member comprises a coil shape configured to contact an inner wall of the vessel.

10. The device of claim 9 wherein the tubular member comprises a shape memory material.

11. The device of claim 1 wherein the tubular member is deformed into a configuration having a plurality of upper peaks and lower peaks, whereby a proximal end of the tubular member is affixed to a distal end of the tubular member to form a circumferential ring.

12. The device of claim 11 wherein a plurality of circumferential rings are affixed together.

13. The device of claim 1 wherein a plurality of the tubular members are braided to form a mesh.

14. The device of claim 13 further comprising at least one solid segment braided together with the plurality of tubular members.

15. A method for manufacturing a stent for use in a vessel, the method comprising:

providing a tube having a lumen;

forming a multiplicity of pores in a lateral surface of the wire and in fluid communication with the lumen;

forming a stent from the tube; and

inserting a therapeutic agent into the lumen,

wherein the therapeutic agent is formulated to be retained within the lumen during delivery of the stent and thereafter eluted within the vessel.

16. The method of claim 15 wherein the therapeutic agent is inserted into a proximal opening of the tube.

17. The method of claim 15 wherein the tube is formed from a shape-memory alloy and forming a stent from the tube comprises processing the tube to deploy to a coil shape.

18. The method of claim 15 wherein forming a stent from the tube further comprises:

deforming the tube into a configuration having a plurality of upper peaks and lower peaks;

affixing a proximal end of the tube to a distal end of the tube to form a circumferential ring; and

affixing a plurality of circumferential rings together to form the stent.

19. The method of claim 15 wherein forming a stent from the tube comprises braiding a plurality of tubes to form a mesh stent.

20. The method of claim 19 further comprising braiding at least one solid wire segment together with the plurality of tubes.

21. The method of claim 15 wherein the pores are disposed circumferentially about an exterior surface of the tube.

22. The method of claim 15 wherein the pores are disposed at variable distances with respect to one another.

23. A method for delivering a therapeutic agent into a vessel, the method comprising:

providing a stent formed from a tubular member, the tubular member having a lumen with a therapeutic agent disposed therein and a multiplicity of pores in fluid communication with the lumen;

implanting the stent within the vessel; and
eluting the therapeutic agent from the lumen into the vessel through the multiplicity of pores.

24. The method of claim 23 further comprising providing a bioabsorbable polymer formulated with the therapeutic agent, wherein the bioabsorbable polymer modulates elution of the therapeutic agent.